REMARKS

Claims 26, 33, 34, 35, 37, and 44 have been amended. Claims 26-28, 30-35, 37, 38, and 40-48 are pending in the application. Applicants reserve the right to pursue the original claims and other claims in this and other applications.

Claims 26, 33, 34, 35, 37, and 44 were amended to more accurately recite that various elements recited therein are arranged on a substrate rather than "in" a substrate.

Claims 26-28, 30-35, 37, 38, 40, and 42-48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over PCT Publication WO 97/20434 ("Denyer") in view of U.S. Patent No. 6,133,953 ("Okada"). This rejection is respectfully traversed.

Independent claim 26 recites "an interpolator located on the substrate and configured to estimate the level of the first spectral component in the light received by at least one of the second photosensitive sites based on at least one measurement of the first spectral component obtained respectively by at least one of the first photosensitive sites" wherein "each first photosensitive site is configured to measure the level of a first spectral component in light received by the respective first photosensitive site" and "each second photosensitive site is configured to measure the level of a second spectral component in light received by the respective second site, said second spectral component being different from said first spectral component." The Denyer and Okada combination does not teach or suggest these limitations, or otherwise render claim 26 obvious.

To the contrary, Denyer only refers to "a processing unit 28" that "preferably also interpolates the red, green, and blue channel signals to form synchronous, parallel colour channel signals for the video signal V_{RGB} before being output to the display unit 30." (Denyer, page 12, lines 8-14). Denyer does not describe how the processing unit 28 interpolates the red, green, and blue channel signals or what data is used for the interpolation. The Office Action acknowledges that Denyer "does not explicitly disclose that estimating the level of the first spectral component in the light received by at least one of the second photosensitive sites based on at least one

measurement of the first spectral component obtained respectively by at least one of the first photosensitive sites" and cites to Okada as teaching this subject matter. (Office Action, page 4).

However, Okada does not cure the deficiencies of Denyer because Okada does not teach or suggest estimating "the level of the first spectral component in the light received by at least one of the second photosensitive sites based on at least one measurement of the first spectral component obtained respectively by at least one of the first photosensitive sites," where "said second spectral component [is] different from said first spectral component" as recited by claim 26. To the contrary, Okada only refers to a process by which signal components from pixels detecting the same type of spectral component (color) are interpolated to generate a weighted average of a signal component of that same type. (Okada, column 6, lines 51-65). This fact is especially clear in FIGS. 2A through 2E of Okada. For example, in FIG. 2B, it can be seen that Okada only uses the magenta cells Mg11, Mg13, and Mg31 to interpolate a magenta signal component corresponding to the central position of the matrix of FIG. 2A. (Okada, column 6, lines 51-65). Similarly, in FIG. 2C, Okada only uses the green cells G10, G12, and G32 to interpolate a green signal component. (Okada, column 6, lines 51-65). In FIG. 2D, Okada only uses the cyan cells Cy01, Cy21, and Cy23 to interpolate a cyan signal component. (Okada, column 6, lines 51-65). In FIG. 2E, Okada only uses the yellow cells Ye02, Ye20, and Ye22 to interpolate a yellow signal component. (Okada, column 6, lines 51-65). Okada's interpolation calculations (reproduced below) clearly show that Okada only teaches using one type (color) of pixel cell to interpolate a signal component for that same type (color).

$$Mg=2\times Mg11+Mg13+Mg31 \quad (10)$$

$$G=2\times G12+G10+G32 \quad (11)$$

$$Cy=2\times Cy21+Cy01+Cy23 \quad (12)$$

$$Ye=2\times Ye22+Ye02+Ye20 \quad (13)$$

(Okada, column 6, lines 60-65).

Since the Denyer and Okada combination does not teach or suggest all of the limitations of claim 26, claim 26 is not obvious over the cited references. Independent claims 37 and 44 include limitations similar to those of claim 26 and are allowable for the same reason. Claims 27, 28, and

30-35 depend from claim 26 and are patentable at least for the reasons mentioned above. Claims 38, 40, 42 and 43 depend from claim 37 and are patentable at least for the reasons mentioned above. Claims 45-48 depend from claim 44 and are patentable at least for the reasons mentioned above. Applicant respectfully requests that the rejection be withdrawn and the claims allowed.

Claim 41 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Denyer in view of U.S. Patent No. 6,091,851 ("Acharya"). This rejection is respectfully traversed. Claim 41 depends from claim 37 and is patentable over Denyer for at least the reasons mentioned above. Acharya, which has been cited as allegedly teaching the use of 24 bits, does not cure the deficiencies of Denyer discussed above. Accordingly, Applicants respectfully request that the rejection be withdrawn and the claims allowed.

In view of the above, Applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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